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EXAMINER
SHAN, APRIL YING

ART UNIT	PAPER NUMBER
2135	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 October 2007 and 27 June 2007</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>8-21 and 27-29</u> is/are pending in the application.

   4a) Of the above claim(s) <u>29</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>8-21 and 27-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 8-21 and 27-28 have been examined.

Election/Restrictions

2.   Applicant's election Species I (Claims 8-21 and 27-28), in the reply filed on 1

October 2007 is acknowledged. However, because the Applicant did not distinctly and

specifically point out the supposed errors in the restriction requirement, the election has

been treated as an election without traverse (M.P.E.P. § 818.03(a)).

        Therefore, Species II (Claim 29) is hereby withdrawn from consideration.

Claim Objections

3.   Claims 27-28 are objected to because of the following informalities:

        As per **claim 27**, the recited claim limitation "...require viewing of information in

at least one sub-stream in order to view information in another sub-stream" is

grammatically incomprehensible.

        Any claim not specifically addressed, above, is being objected as incorporating

the deficiencies of a claim upon which it depends.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 8-21 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per **claim 8**, "...at least one rule store in an internal and non-volatile memory of the player" is being recited. However, the examiner carefully and respectfully reviewed the Applicant's original disclosure and cannot find support for this amended claim limitation. For example, in the par. [0096] of the current application, it recites "Control Block 13 includes, or has access to,...and memory. The memory will store the rules...". First, the original disclosure does not disclose it is an internal and non-volatile memory in the player. Second, the memory stores all of the rules, not at least one rule. Therefore, the examiner finds no support in the original disclosure "...at least one rule store in an internal and non-volatile memory of the player".

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 103

6.   The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.

4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

7.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8.   Claims 8-19, 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over NPL publication, "Performance Study of a Selective Encryption Scheme for the Security of Networked, Real-Time Video", by Spanos, et al., as published by the "Proceedings of the Fourth ACM International Conference on Computer Communications and Network," September 1995, (hereinafter Spanos '95), in view of the NPL publication, "Applied Cryptography", by Schneier, published by John Wiley and Sons, 1996 (hereinafter Schneier '96), in view of Aucsmith (U.S. Patent No. 5,915,018 and hereinafter Aucsmith) and in view of Huizer et al. (U.S. Patent No. 5,875,303 and hereinafter Huizer et al.)

Since the Spanos '95 NPL publication relies on the reader having detailed knowledge of the internals of the DES encryption algorithm, examiner uses Schneier '96

to explicate DES as referred to in Spanos '95 and also to disclose the key transfer

limitations in the claims.

As per **claim 8**, Spanos '95 discloses a method of encrypting and decrypting

MPEG video data on an MPEG player. Specifically, Spanos '96 discloses: a streaming

media player (Spanos '95: section Titled, "4. Aegis Performance", Page 4, col. 2, lines

43-45) providing content protection and digital rights management (Spanos '95: Section

Titled, "3. Aegis Overview", Page 3, col. 2, lines 15-43), including:

a port configured to receive a digital bit stream (Spanos '95: Section Titled, "4.

Aegis Performance", Page 4, col. 2, lines 43-45. Please note MPEG players of

necessity have an input to receive a digital bit stream) the digital bit stream including:

content which is encrypted at least in part (Spanos '95: Section Titled, "3. Aegis

Overview", Page 3, col. 2, lines 15-43. Please note the encryption of only the I-frames),

at least two sub-streams which have been muxed together, at least one of the sub-

streams including compressed information (Spanos '95: Section Titled, "3. Aegis

Overview", Page 3, col. 2, lines 16-29 - MPEG reads on substreams and compressed

information) a control arrangement (Spanos '95: Section Titled, "5.1 Simulation Model",

Page 5, col. 1, lines 40-41 - Please note MPEG player encoders and decoders read on

a control arrangement) including: means for opening secure containers and extracting

cryptographic keys, and means for decrypting the encrypted portion of the content;

Additionally, Spanos '95 explicitly discloses the use of the DES algorithm to

encrypt the bit stream (Spanos '95: Section Titled, "3. Aegis Overview", Page 4, col. 1,

line 30 - col. 2, line 3). However, Spanos '95 does not explicitly describe the DES algorithm, Examiner provides Schneier '96 to describe how DES reads on the remainder of the claim limitations.

Schneier '96 discloses the DES algorithm. Specifically, Schneier '96 discloses:

control information for controlling use of the content, including at least one key suitable for decryption of at least a portion of the content (Schneier '96: Section Titled, "12.2 Description of DES", Page 270, lines 5-13 - note description of the key);

the control arrangement includes means for decrypting the encrypted portion of the content (Schneier '96: Section Titled, "12.2 Description of DES", Subsection Titled, "Decryption DES", Page 277, lines 11-22).

Furthermore, Schneier '96 discloses key transfer. Specifically, Schneier '96 discloses:

The bit stream includes a secure container including the control information which includes the key (Schneier '96: Section Titled, "8.3 Transferring Keys", Page 176, lines 38-43. Please note that Schneier '96 discloses "key-encryption keys" to encrypt "data keys" that may be transferred over the communication channel);

The control arrangement includes means for opening secure containers and extracting cryptographic keys (Schneier '96: Section Titled, "8.3 Transferring Keys", Page 176, lines 38-43)

It woud been obvious to a person having ordinary skill in the art at the time of the invention to apply the key transfer of Schneier '96 to the encrypted MPEG player of Spanos '95. The motivation to combine is suggested by Schneier '96 which discloses

the desirability of not transmitting a data key in the clear over a communications line (Schneier '96: Section Titled, "8.3 Transferring Keys", Page 176, lines 34-37).

The combined teachings of Spanos '95 and Schneier '96 do not disclose expressly the control arrangement contains a rule or rule set associated with governance of at least one sub-stream or object.

Aucsmith disclosed the control arrangement contains a rule or rule set <u>govering at least one aspect of usage of</u> at least one sub-stream or object, <u>wherein the rule or rule set includes at least one rule stored in an internal and non-volatile memory of the player</u> ("Player...A hard disk drive, a CD-ROM drive, and a DVD drive, are examples of players. As used herein, these terms refer not simply to the mechanical "drives" but also include the electronics necessary to perceive data recorded on the machine readable media" - e.g. col. 4, lines 5-34, col. 4, lines 37-42, col. 5, lines 26-42, col. 5, line 55 - col. 6, line 12, "...the rules communicated to video controller 210 from DVD drive 202..." - e.g. col. 7, line 67 - col. 8, line 1, "within a DVD drive, decrypting at least one encrypted rule set; within a DVD drive, encrypting at least one rule set the video controller public key" - e.g. claim 19. Please note in fig. 1a, fig. 1b and fig. 2, DVD drive 202 is supplied with a DVD disc 203 and according to the definition of the player cited above in the reference, a DVD disc 203 is internal to the player and it is well known in the art that both DVD drive and DVD disc are non-volatile memory);

At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate Aucsmith's a rule or rule set associated with governance of at least one sub-stream or object into the player of Spanos '95 - Schneier '96.

The motivation of doing so would have been to "describe what sort of video

controller is allowed access to the content" and "protecting the analog video output

signal", as taught by Aucsmith (col. 5, lines 32-33 and col. 6, lines 25-26)

The combined teachings of Spanos '95 - Schneier '96 - Aucsmith do not

explicitly disclose: wherein the player further includes: a demux designed to separate

and route the sub-streams; a decompression unit configured to decompress at least one

of the sub-streams, the decompression unit and the demux being connected by a

pathway for the transmission of information; and a rendering unit designed to process

decompressed content information for rendering.

Huizer et al. discloses the Philips ™ Cdi ™ media streaming player. Specifically,

Huizer et al. discloses: wherein the player further includes:

a demux designed to separate and route the sub-streams (Huizer et al. : Fig. 6,

item 71 (demux); col. 6, lines 60-65); a decompression unit configured to decompress at

least one of the sub-streams, the decompression unit and the demux being connected

by a pathway for the transmission of information (Huizer et al. : Fig. 6, items 71 (demux)

and 5 (decoder which in the context of CDi and MPEG read on a decompression unit)

connected by items 72, 73 and 74); a rendering unit designed to process decompressed

content information for rendering (Huizer et al. : col. 6, lines 55-57). It would have been

obvious to a person having ordinary skill in the art to apply the configuration of Huizer et

al. to the MPEG player of Spanos '95 and Schneier '96 in combination. The motivation

to combine to include a demultiplexer, a decompression unit, and a rendering unit as

taught by Huizer et al. is on the basis that these parts are integral and necessary to a

streaming media player such as the MPEG player of Spanos '95 and Schneier '96 in combination.

Additonally, the combined teachings of Spanos '95 - Schneier '96 - Aucsmith - Huzer et al. disclose and a stream controller operatively connected to the decompression unit (Huizer et al. : FIG. 6, item 75 with items 71, 72, 73, 74 and 5), the stream controller including decryption functionality configured to decrypt at least a portion of a sub-stream (Spanos '95: Section Titled, "3. Aegis Overview", Page 4, col. 1, line 30 - col. 2, line 3. Please note the DES is integrated into the media player) based on at least one key passed from the control arrangement (Schneier '96: Section Titled, "8.3 Transferring Keys", Page 176, lines 38-43) and pass the decrypted sub-stream to the decompression unit (Spanos '95: Section Titled, "3. Aegis Overview", Page 4, col. 1, line 30 - col. 2, line 3. Please note the DES is integrated into the media player).

As per **claim 9**, the combined teachings of Spanos '95 – Schneier '96 – Aucsmith - Huzer et al. discloses a player as applied above in claim 8. Aucsmith further discloses wherein the rule or rule set includes at least one rule that is delivered from an external source (e.g. col. 7, lines 23-34).

As per **claim 10**, the combined teachings of Spanos '95 – Schneier '96 – Aucsmith - Huzer et al. discloses a player as applied above in claim 9. Aucsmith further discloses at least one rule is delivered as part of the digital bit stream (e.g. col. 3, lines 21-28).

As per **claim 11**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 8. Aucsmith further

discloses wherein the rule or rule set specifies conditions under which the governed

sub-stream or object may be decrypted (e.g. col. 7, line 63- col. 8, line 6).

As per **claim 12**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 8. Aucsmith further

discloses wherein the rule or rule set governs at least one aspect of access to the

governed sub-stream or object (e.g. col. 4, lines 26-30).

As per **claim 13**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 8. Aucsmith further

discloses wherein the governed aspect includes making copies of the governed sub-

stream or object (e.g. col. 6, lines 22-30).

As per **claims 14-16**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 8. Aucsmith further

discloses wherein the governed aspect includes transmitting the governed sub-stream

or object through a digital output port (e.g. col. 6, lines 22-30), wherein the rule or rule

set specifies that the governed sub-stream or object can be transferred to a second

device, but rendering of the governed sub-stream or object must be disabled in the

player prior to or during the transfer (e.g. col. 6, lines 22-30, col. 7, lines 8-22) and

wherein the second device includes rendering capability, lacks at least one feature

present in the streaming media player, and is at least somewhat more portable than the

streaming media player (e.g. abstract and col. 4, lines 37- 42).

As per **claims 17-19**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 11. Aucsmith

further discloses wherein the control arrangement contains at least two rules governing

access to or use of the same governed sub-stream or object ("rule set" – e.g. col. 4, line

26), wherein a first of the two rules was supplied by a first entity, and the second of the

two rules was supplied by a second entity and wherein the first rule controls at least one

aspect of operation of the second rule (e.g. col. 6, lines 22-30 and col. 7, lines 23-34).

As per **claim 21**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 12. Aucsmith

further discloses wherein the governed aspect includes a requirement that audit

information be provided (e.g. col. 6, lines 22-30).

As per **claim 27**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 8. Aucsmith further

discloses wherein the rule or rule set is configured to conditionally require viewing of

information in at least one sub-stream in order to view information in another sub-

stream (e.g. col. 2, lines 64-67, col. 4, lines 31-34, col. 6, lines 22-29, col. 6, line 60 –

col. 7, line 34)

9.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spanos

'95 – Schneier '96 – Aucsmith - Huzer et al. as applied above in claims 8-19 and 21

above, further in view of Inoue (U.S. Patent No. 6,011,761)

As per **claim 20**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 12.

The combined teachings of Spanos '95 – Schneier '96 – Aucsmith - Huzer et al.

do not disclose expressly wherein the governed aspect includes use of at least one

budget.

Inoue discloses wherein the governed aspect includes use of at least one budget

(e.g. abstract, col. 2, lines 11-17, claims 6 and 12).

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to incorporate the governed aspect includes use of at least one budget

into the Spanos '95 – Schneier '96 – Aucsmith - Huzer et al.'s player.

The motivation of doing so would have been to "prevent incorrectly billing the

client", as taught by the abstract of Inoue.

10.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spanos

'95 – Schneier '96 – Aucsmith - Huzer et al. as applied above in claims 8-19, 21 and 27

above, further in view of Eldering (U.S. Patent No. 6,324,519)

As per **claim 28**, the combined teachings of Spanos '95 – Schneier '96 –

Aucsmith - Huzer et al. discloses a player as applied above in claim 27.

The combined teachings of Spanos '95 – Schneier '96 – Aucsmith - Huzer et al.

do not expressly disclose wherein the at least one sub-stream comprises an

advertisement.

Eldering discloses wherein the at least one sub-stream comprises an

advertisement (e.g. col. 11, lines 43-46).

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to incorporate Eldering's at least one sub-stream comprises an

advertisement into the Spanos '95 – Schneier '96 – Aucsmith - Huzer et al.'s player

motivated by "...allows the content/opportunity provider the ability to maximize revenue

for the advertising opportunity", as disclosed by Eldering (abstract)

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. (See PTO-892).

12.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April Y. Shan whose telephone number is (571) 270-1014. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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7 December 2007
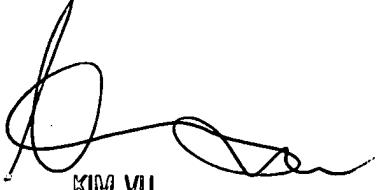
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